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NOV 28 2006

Listing of Claims:

1. (Currently Amended) A packet data transmission network system, comprising:

a receiver;

a network element; and

a sender for transmitting data packets to the receiver through a packet data connection via ~~a~~ the network element and a radio part, the receiver being arranged to ~~acknowledging~~ acknowledge each received data packet by an acknowledgment message containing header data comprising a field indicating a window size, a number of transmitted bytes for which the sender has not received an acknowledgment from the receiver being not allowed to exceed the window size;

wherein said network element is arranged to buffer data packets transmitted by from the sender to the receiver and to receive the acknowledgement message transmitted from the receiver to the sender, examine and modify the header data[[,]] detect transmission conditions comprising buffering conditions of the data packets at said network element and radio conditions of the radio part between the sender and the receiver, and modify the field indicating the window size included in the acknowledgement message in accordance with the transmission conditions accordingly.

2. (Previously Presented) The system according to claim 1, wherein said network element is arranged to modify the window size to a lower value when said network element detects a decreasing quality of transmission conditions.

3. (Previously Presented) The system according to claim 1, wherein said network element is arranged to quit modifying the window size when said network element detects that a quality of transmission conditions is increasing and allow the receiver to set the window size normally.

4. (Cancelled)

5. (Previously Presented) The system according to claim 1, wherein the packet data connection comprises a TCP/IP connection.

6. (Previously Presented) The system according to claim 1, wherein said network element comprises an SGSN network element for performing header compression.

7. (Currently Amended) A network element in a packet data transmission network system, comprising:

buffering means for buffering data packets transmitted by a sender to a receiver through a packet data connection via a radio part, the receiver being arranged to acknowledge each received data packet by an acknowledgment message containing header data comprising a field indicating a window size, and for receiving the acknowledgement message transmitted from the receiver to the sender, a number of transmitted bytes for which the sender has not received an acknowledgment from the receiver being not allowed to exceed the window size;

~~examining means for examining and modifying the header data;~~

detecting means for detecting transmission conditions comprising buffering conditions of data packets at said network element and radio conditions of the radio part between the sender and the receiver; and

modifying means for modifying the field indicating the window size included in the acknowledgement message in accordance with ~~according to~~ the detected transmission conditions.

8. (Original) The network element according to claim 7, wherein said modifying means is arranged to modify the window size to a lower value when said detecting means detects a decreasing quality of transmission conditions.

9. (Previously Presented) The network element according to claim 7, wherein said modifying means is arranged to quit modifying the window size when said detecting means detects that a quality of transmission conditions are increasing.

10. (Previously Presented) The network element according to claim 7, wherein the transmission conditions detected by said detecting means comprise buffering conditions of data packets at said buffering means.

11. (Currently Amended) A packet data transmission method, comprising the steps of:

transmitting data packets from a sender to a receiver through a packet data connection via a network element and a radio part, the receiver acknowledging each received data packet by an acknowledgment message containing header data comprising a field indicating a window size, a number of transmitted bytes for which the sender has not received an acknowledgment from the receiver being not allowed to exceed the window size;

buffering, in said network element, ~~transmitted~~ data packets transmitted from the sender to the receiver, and receiving, in said network element, the acknowledgement message transmitted from the receiver to the sender; ~~examining and modifying the header data[;]]~~ and

detecting transmission conditions comprising buffering conditions of the data packets at said network element and radio conditions of the radio part between the sender and the receiver[;]]; and

modifying the field indicating the window size included in the acknowledgement message in accordance with the transmission conditions accordingly.

12. (Previously Presented) The system according to claim 2, wherein said network element is arranged to quit modifying the window size when said network element detects that a quality of transmission conditions is increasing and allow the receiver to set the window size normally.

13. (Cancelled)

14. (Cancelled)

15. (Previously Presented) The system according to claim 2, wherein the packet data connection comprises a TCP/IP connection.

16. (Previously Presented) The system according to claim 3, wherein the packet data connection comprises a TCP/IP connection.

17. (Cancelled)

18. (Previously Presented) The system according to 2, wherein said network element comprises an SGSN network element for performing header compression.

19. (Previously Presented) The system according to 3, wherein said network element comprises an SGSN network element for performing header compression.

20. (Cancelled)

21. (Previously Presented) The system according to 5, wherein said network element comprises an SGSN network element for performing header compression.

22. (Cancelled)

23. (Previously Presented) The network element according to claim 8, wherein said modifying means is arranged to quit modifying the window size when said detecting means detects that the quality of transmission conditions are increasing.

24. (Previously Presented) The network element according to claim 8, wherein the transmission conditions detected by said detecting means comprise buffering conditions of data packets at said buffering means.

25. (Previously Presented) The network element according to claim 9, wherein the transmission conditions detected by said detecting means comprise buffering conditions of data packets at said buffering means.